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METHOD FOR PHOTOCATALYTICALLY RENDERING A SURFACE
OF A SUBSTRATE SUPERHYDROPHILIC, A SUBSTRATE WITH
A SUPERHYDROPHILIC PHOTOCATALYTIC SURFACE, AND
METHOD OF MAKING THEREOF

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ABSTRACT

10 The surface of a substrate is coated with an abrasion-
resistant photocatalytic coating comprised of a semiconductor
photocatalyst. Upon irradiation by a light having a wavelength
of an energy higher than the bandgap energy of the
photocatalyst, water is chemisorbed onto the surface in the
form of hydroxyl groups (OH^-) whereby the surface of the
photocatalytic coating is rendered highly hydrophilic. In
15 certain embodiments, the surface of a mirror, lens, or
windowpane is coated with the photocatalytic coating to exhibit
a high degree of antifogging function. In another embodiment,
an article or product coated with the photocatalytic coating is
disposed outdoors and the highly hydrophilic surface thereof is
20 self-cleaned as it is subjected to rainfall. In a still another
embodiment, an article is coated with the photocatalytic
coating and, when the article is soaked in, rinsed by or wetted
with water, fatty dirt and contaminants are readily released
without resort to a detergent.

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